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INTELLECTUAL PROPERTY LAW

Appl. No : 09/621,234 Confirmation No.: 3325
Applicant : HENSHAW et al.
Filed : June 16, 2003
Title : VERTICAL CYLINDRICAL SKEIN OF HOLLOW FIBER
MEMBRANES AND METHOD OF MAINTAINING CLEAN
FIBER SURFACES

TC./A.U. : 1797
Examiner : FORTUNA, Ana M.

Docket No. : 4320-241
Customer No. : 001059

Board of Patent Appeals and Interferences
United States Patent and Trademark Office
P. O. Box 1450
Alexandria, Virginia 22313-1450

April 6, 2009

REPLY BRIEF

The Appellants make the following submissions in reply to the Examiner's Answer of February 6, 2009. The numbering used in the Examiner's Answer will be followed in the submissions below. The Appellants do not admit any points made in the Examiner's Answer that are not specifically addressed below.

(1) Real Party in Interest

The Examiner's Answer refers to a supplemental letter filed on June 30, 2006. That letter was filed in a previous appeal in this application and prior to the current Brief in Support of Appeal, filed on May 30, 2008 (amended September 8, 2008 and December 4, 2008). The letter filed on June 30, 2006 is no longer accurate, and the Real Party in Interest is as described in the Brief in Support of Appeal.

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(2) Related Appeals and Interferences

The Examiner's Answer refers to appeals in 11/049,988 and 11/059,403 and states that an appeal brief has not been filed yet. Appeal briefs were filed in appeals in both of those applications. The appeals in those applications are no longer pending, as described in the Brief in Support of Appeal. An appeal in 11/008,977 and a prior appeal in the present application were also filed but are no longer pending. No decisions were rendered in any of these appeals.

(9) Grounds of Rejection and (10) Response to Arguments

One issue in this appeal is the proper application of the third test for recapture (as stated in MPEP 1402.02) to this application. The third test requires a comparison of the claims in the reissue application to the "cancelled" claims, or the claims of the application for the patent being reissued as they were prior to the amendment that resulted in the allowance of the patent being reissued.

In this case, the test for recapture requires an analysis of, (a) claims 1 and 9 of application 08/690,045 as they were prior to the amendment of January 8, 1998; (b) claims 1 and 9 of Patent 5,783,083; and, (c) the claims under appeal (15-18 and 24) of this reissue application. The relevant provisions of these claims are,

(a) in cancelled claims 1 and 9, no limitations regarding fiber spacing;

(b) in claims 1 and 9 of Patent 5,783,083, "fibers spaced apart by a flexible support means having a thickness corresponding to a desired lateral spacing between adjacent fibers, said support means extending over only each terminal portion of said fibers near their ends, so as to maintain said ends in a closely-spaced apart relationship"; and,

(c) in the claims of this reissue application, "at least a portion of the membranes [fibers] spaced apart from adjacent membranes by the potting

material to a centre-to-centre distance in the range from 1.2 to 5 times the outside diameter of the membranes."

Page 3 of the Examiner's Answer states that, "A broadening aspect is present in the reissue which was not present in the application for patent." Recapture considers the application for patent by asking if there is any broadening relative to claims as they were pending prior to an amendment that resulted in the issued patent. Broadening relative to claims that actually issued to patent is expressly permitted in reissue applications that, like the present reissue application, were filed within two years of the issue date of the patent. The Applicants submit that there is no broadening aspect present in the claims of this reissue application compared to the claims of application 08/690,045 as they were prior to the amendment that resulted in the issued patent. On the contrary, the claims of application 08/690,045 prior to the January 1998 amendment had no limitations relating to the fibers being spaced apart. The claims of this reissue application have limitations specifying that the fibers are spaced apart by the potting material, and the extent of that spacing. Accordingly, the claims of this reissue application are narrower in relation to fiber spacing than the claims of application 08/690,045 prior to the amendment that resulted in patent 5,783,083.

Page 3 of the Examiner's Answer further states that "the broadening aspect (in the reissue) relates to claim subject matter that applicant previously surrendered during prosecution of the application." What is surrendered during prosecution is the scope of claims that are cancelled, or claims as they were prior to an amendment that results in an issued patent. Even if the claims of this reissue application are broader in relation to fiber spacing than the claims of Patent 5,783,083, what was arguably surrendered in application 08/690,045 was a claim that had no limitation relating to fiber spacing. The claims of this reissue application have limitations relating to fiber spacing and therefore do not seek to recapture surrendered claim scope. Specifically, the claims of this reissue

application do not seek to recapture the scope of a claim with no limitations relating to fiber spacing.

Page 4 of the Examiner's Answer refers to page 7 of the amendment of January 12, 1998. That amendment should be considered in view of the specification. Column 7, lines 28 to 31 state that, "the center to center distance of adjacent fibers is preferably in the range from 1.2 (1.2d) to about 5 times (5d) the outside diameter 'd' of a fiber." This is part of the limitation appearing in the claims of this reissue application. If the center to center distance of adjacent fibers is at least 1.2d, the fibers are necessarily spaced apart from each other. Column 12, line 53 to column 13, line 16 describes cards or strips 15, 16 shown in Figures 4 and 5 which may be used to space the fibers as the fibers are assembled into a bundle. Referring to column 13, line 55 to column 14, line 7 and Figure 5, the bundled fibers may then be potted into a header by placing the ends of the fibers into a ring 20, and then filling the ring with a fugitive material and a fixing material. The strips are submerged into either the fugitive material or the fixing material and space the fibers while the fixing material hardens. After the fixing material hardens, the strips do not need to be retained in the finished header (column 13, lines 63-66). The strips might be cut away after the fixing material has hardened (column 14, lines 30-31). Other potting methods can also be used that result in spaced apart fibers without using strips (column 14, lines 37-49). Accordingly, it is not necessary for strips to be part of the completed device.

The January 1998 amendment, and the claim limitations added with that amendment, do not recite strips, cards or planar spacing means. Pages 6 and 7 of the January 1998 amendment introduce the problem that fibers may break as they move in use. The amendment states that, "fibers will be immune to the damage suffered by Kunio's skein fibers, provided the fibers were potted in a spaced apart relationship in a header which was not rigid." The problem of fibers breaking is also discussed in the application at column 14, lines 8-31. The fibers

can break where they exit through a face of the header into the substrate to be filtered (column 14, lines 8-11). The strips, even if they were used and not removed, do not space the fibers where they exit through a face of the header into the substrate to be filtered. However, the circumferences of the fibers may be cushioned by the potting material (column 14, lines 11-13). Although the claims of this reissue application do not have the exact limitation of the claims of Patent 5,783,083 noted in the Examiner's Answer, the present claims do have a limitation that the membranes are spaced apart from each other by the potting material, by a specified amount. This is a narrowing limitation relative to the cancelled claims of application 08/690,045 in the subject matter area of the amendment.

Page 4 of the Examiner's Answer states that, "the applicants surrendered broader coverage when they added the proviso to the claims in order to obtain a patent. Claims 15-18 and 24 in this reissue lack that limitation and thus they are rejected under 35 USC 251 as involving an improper attempt to recapture surrendered subjected matter." The Applicants submit that the Examiner's Answer incorrectly seeks to determine recapture based on the claim that was issued, not the claim of the application as it was prior to the amendment that resulted in the issued claim. The analysis in the Examiner's Answer is contrary to MPEP 1402 which, in the third step, permits a limitation added during prosecution to be broadened during reissue provided that the claim is not made broader in relation to that limitation than the cancelled claim. In the present application, the claims are not broader than, or even as broad as, any cancelled claims in relation to fiber spacing.

At the bottom of page 4, the Examiner's Answer acknowledges that claim 15 of this reissue application includes limitations relating to fiber spacing that were not recited in claims 1 and 9 of application 08/690,045. However, the Examiner's Answer then states that claims 15-18 and 24 are missing the proviso of fibers

spaced apart by a flexible support means having a thickness corresponding to a desired lateral spacing between adjacent fibers so as to maintain the fibers of the fibers in a closely-spaced apart relationship. The Examiner's Answer argues, also on page 5, that the claims of this reissue application are therefore "broader in scope in some aspects and narrower in others" and so include improper recapture. The Applicants respectfully submit that this statement is incorrect. The claims of this reissue application are in between the scope of the cancelled claims and the claims of the issued patent in relation to fiber spacing. There is no improper recapture in this situation.

The Examiner's Answer acknowledges that claim 15 is also narrower than claims 1 and 9 of application 08/690,045 in reciting a pump to apply suction to the membranes, element c) of claim 15. This is not the only relative narrowing of claim 15. Claim 15 also recites in element d) a gas distribution system having through-passages with openings distributed both radially and circumferentially between the membranes. Claims 1 and 9 of application 08/690,045 and patent 5,783,083 did not have this limitation. Accordingly, the Applicants submit that these other narrowing aspects of claim 15, in the context of a claim that is at least not broader than the cancelled claims of 08/690,045 in relation to fiber spacing, is sufficient to avoid improper recapture. The Examiner's Answer notes on page 5 that recapture can be avoided by adding sufficient narrowing limitations to a claim and the Applicants submit that element d) is a sufficient narrowing limitation.


The Examiner's Answer, at the bottom of page 5, ends with a statement that spacing between potted membranes is old in the art as evidenced in Patent 5,248,426. There is no evidence on record that Patent 5,248,426 was so well known at the effective filing date of application 08/690,045 as to make anything "old in the art." Even if spacing between membranes is discussed in Patent 5,248,426, the claims of this reissue application are still narrower than the

cancelled claims in relation to membrane spacing. Further, there is no rejection of the claims of this reissue application for anticipation over Patent 5,248,426, or for obviousness over that patent in combination with other references or teaching. The claims of this reissue application are patentable over Patent 5,248,426 and do not involve any improper recapture.

For the reasons above, the Applicants respectfully submit that the rejection of these claims was in error and requests reversal of these rejections.

Respectfully submitted,

HENSHAW et al.

By 

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